

SEQUENCE LISTING

<110> NOVARTIS AG
NOVARTIS PHARMA GMBH

<120> OCULAR GENE THERAPY

<130> 116566-010

<140> PCT/EP03/09497

<141> 2003-08-27

<150> 60/406,470

<151> 2002-08-28

<160> 25

<170> PatentIn Ver. 3.3

<210> 1

<211> 183

<212> PRT

<213> Homo sapiens

<400> 1

His	Ser	His	Arg	Asp	Phe	Gln	Pro	Val	Leu	His	Leu	Val	Ala	Leu	Asn	1	5	10	15
Ser	Pro	Leu	Ser	Gly	Gly	Met	Arg	Gly	Ile	Arg	Gly	Ala	Asp	Phe	Gln	20	25	30	
Cys	Phe	Gln	Gln	Ala	Arg	Ala	Val	Gly	Leu	Ala	Gly	Thr	Phe	Arg	Ala	35	40	45	
Phe	Leu	Ser	Ser	Arg	Leu	Gln	Asp	Leu	Tyr	Ser	Ile	Val	Arg	Arg	Ala	50	55	60	
Asp	Arg	Ala	Ala	Val	Pro	Ile	Val	Asn	Leu	Lys	Asp	Glu	Leu	Leu	Phe	65	70	75	80
Pro	Ser	Trp	Glu	Ala	Leu	Phe	Ser	Gly	Ser	Glu	Gly	Pro	Leu	Lys	Pro	85	90	95	
Gly	Ala	Arg	Ile	Phe	Ser	Phe	Asp	Gly	Lys	Asp	Val	Leu	Arg	His	Pro	100	105	110	
Thr	Trp	Pro	Gln	Lys	Ser	Val	Trp	His	Gly	Ser	Asp	Pro	Asn	Gly	Arg	115	120	125	
Arg	Leu	Thr	Glu	Ser	Tyr	Cys	Glu	Thr	Trp	Arg	Thr	Glu	Ala	Pro	Ser	130	135	140	
Ala	Thr	Gly	Gln	Ala	Ser	Ser	Leu	Leu	Gly	Gly	Arg	Leu	Leu	Gly	Gln	145	150	155	160
Ser	Ala	Ala	Ser	Cys	His	His	Ala	Tyr	Ile	Val	Leu	Cys	Ile	Glu	Asn	165	170	175	

Ser Phe Met Thr Ala Ser Lys
180

<210> 2
<211> 551
<212> DNA
<213> Homo sapiens

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<400> 2
acagccaccg cgacttccag ccggtgctcc acctgggttg gctcaacagc cccctgtcag 60
gcggcatgcg gggcatccgc ggggccgact tccagtgctt ccagcaggcg cgggccgtgg 120
ggctggcggg caccttccgc gccttcctgt cctcgcgctt gcaggacctg tacagcatcg 180
tgcgccgtgc cgaccgcgca gccgtgccca tcgtcaacct caaggacgag ctgctgtttc 240
ccagctggga ggctctgttc tcaggctctg aggggtccgct gaagcccggg gcacgcatct 300
tctcctttga cggcaaggac gtcctgaggc accccacctg gccccagaag agcgtgtggc 360
atggctcgga ccccaacggg cgcaggctga ccgagagcta ctgtgagacg tggcggacgg 420
aggctccctc ggccacgggc caggcctcct cgctgctggg gggcaggctc ctggggcaga 480
gtgccgcgag ctgccatcac gcctacatcg tgctctgcat tgagaacagc ttcatgactg 540
cctccaagta g 551
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<210> 3
<211> 207
<212> PRT
<213> Mus musculus

```
<400> 3
Met Glu Thr Asp Thr Leu Leu Leu Trp Val Leu Leu Leu Trp Val Pro
 1             5             10             15

Gly Ser Thr Gly Asp Ala Ala His Thr His Gln Asp Phe Gln Pro Val
      20             25             30

Leu His Leu Val Ala Leu Asn Thr Pro Leu Ser Gly Gly Met Arg Gly
      35             40             45

Ile Arg Gly Ala Asp Phe Gln Cys Phe Gln Gln Ala Arg Ala Val Gly
      50             55             60

Leu Ser Gly Thr Phe Arg Ala Phe Leu Ser Ser Arg Leu Gln Asp Leu
      65             70             75             80

Tyr Ser Ile Val Arg Arg Ala Asp Arg Gly Ser Val Pro Ile Val Asn
      85             90             95

Leu Lys Asp Glu Val Leu Ser Pro Ser Trp Asp Ser Leu Phe Ser Gly
      100            105            110

Ser Gln Gly Gln Leu Gln Pro Gly Ala Arg Ile Phe Ser Phe Asp Gly
      115            120            125

Arg Asp Val Leu Arg His Pro Ala Trp Pro Gln Lys Ser Val Trp His
      130            135            140

Gly Ser Asp Pro Ser Gly Arg Arg Leu Met Glu Ser Tyr Cys Glu Thr
      145            150            155            160
```

Trp	Arg	Thr	Glu	Thr	Thr	Gly	Ala	Thr	Gly	Gln	Ala	Ser	Ser	Leu	Leu
				165					170					175	
Ser	Gly	Arg	Leu	Leu	Glu	Gln	Lys	Ala	Ala	Ser	Cys	His	Asn	Ser	Tyr
			180					185					190		
Ile	Val	Leu	Cys	Ile	Glu	Asn	Ser	Phe	Met	Thr	Ser	Phe	Ser	Lys	
		195					200					205			

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<210> 4
<211> 624
<212> DNA
<213> Mus musculus
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<400> 4						
atggagacag	acacactcct	gctatgggta	ctgctgctct	gggttcagg	ttccactgg	60
gacgcggccc	atactcatca	ggactttcag	ccagtgtctc	acctggtggc	actgaacacc	120
cccctgtctg	gaggcatgcg	tggtatccgt	ggagcagatt	tccagtgcct	ccagcaagcc	180
cgagcogtgg	ggctgtcggg	caccttccgg	gctttctctg	cctctaggct	gcaggatctc	240
tatagcatcg	tgcgccgtcg	tgacgggggg	tctgtgccca	tcgtcaacct	gaagcagcag	300
gtgctatctc	ccagctggga	ctccctgttt	tctggctccc	aggggtcaagt	gaagaccggg	360
gcccgcattc	tttcttttga	cggcagagat	gtcctgagac	accagcctg	gccgcagaag	420
agcgtatggc	acggctcgga	ccccagtggt	cggaggtctga	tggagagtta	ctgtgagaca	480
tggcgcaactg	aaactactgg	ggctacaggt	caggccctct	ccctgctgtc	aggcagggtc	540
ctcgaacaga	aagctgcgag	ctgccacaac	agctacatcg	tctgtgtcat	tgagaatagc	600
ttctgacct	ctttctccaa	ataq				624

```
<210> 5
<211> 8
<212> PRT
<213> Homo sapiens
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```
<400> 5
Ala Pro Gln Gln Glu Ala Leu Ala
  1             5
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```
<210> 6
<211> 38
<212> DNA
<213> Artificial Sequence
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<220>
<223> Description of Artificial Sequence: Synthetic primer

<400> 6
actggtgacg cggcccatat tcatcaggac tttaagcc 38

```
<210> 7
<211> 32
<212> DNA
<213> Artificial Sequence
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<220>

<223> Description of Artificial Sequence: Synthetic primer

<400> 7

aagggctatc gatctagctg gcagaggcct at

32

<210> 8

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic primer

<400> 8

cactgcttac tggcttatcg

20

<210> 9

<211> 29

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic primer

<400> 9

ctgatgagta tgggccgcgt caccagtgg

29

<210> 10

<211> 32

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic primer

<400> 10

aagggctatc gatctagctg gcagaggcct at

32

<210> 11

<211> 35

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic primer

<400> 11

gatctctaga ccaccatgca tactcatcag gactt

35

<210> 12
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 primer

<400> 12
 actggagaaa gaggtttatc tagctactag 30

<210> 13
 <211> 18
 <212> PRT
 <213> Adenovirus

<400> 13
 Met Arg Tyr Met Ile Leu Gly Leu Leu Ala Leu Ala Ala Val Cys Ser
 1 5 10 15
 Ala Ala

<210> 14
 <211> 96
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 primer

<400> 14
 gatctctaga ccaccatgag gtacatgatt ttaggcttgc tcgcccttgc ggcagtctgc 60
 agcgcggccc atactcatatc tcatacaggac tttcag 96

<210> 15
 <211> 29
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
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<400> 15
 atcgatcata ctcatacagga ctttcagcc 29

<210> 16
 <211> 29
 <212> DNA
 <213> Artificial Sequence

<220>
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<400> 16
 gcggccgcct atttggagaa agaggtcat 29

<210> 17
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
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<400> 17
 tttttttttc agtgtaaaag gtc 23

<210> 18
 <211> 19
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
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<400> 18
 cagatgacat cctggccag 19

<210> 19
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
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<400> 19
 ctatacagga aagtatggca gc 22

<210> 20
 <211> 118
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 20

gccaagcttc catgagggcc tggatcttct ttctcctttg cctggccggg agggctctgg 60
cagccctca gcaagaagcg ctgctcaca gccaccgga cttccagccg gtgctcca 118

<210> 21

<211> 123

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 21

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ctgccagagc cctcccggcc aggcaaagga gaaagaagat ccaggccctc atggaagctt 120
ggc 123

<210> 22

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
primer

<400> 22

gcgcatgtcg acagaatatg ggccaaac 28

<210> 23

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
primer

<400> 23

gcgctactgc agagctaata agctacac 28

<210> 24

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
primer

<400> 24
ccggctagct taaggggtggc gaccggt

27

<210> 25
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 25
gcttcgaacg cgtagcggcc aaccctc

27